Technical Data Sheet

33.06.261E – 07/06

® BORNUMHARZ 6101

Electrically discharging phenolic resin sheets for the lining of steel tanks (general building regulations approval Z-59.22-251)

Description
BORNUMHARZ 6101 is an electrically discharging phenolic resin lining designed especially for stationary steel tanks used for the storage of flammable and non-flammable liquids.

Typical uses
BORNUMHARZ 6101 is recommended as a lining system for use in acid plants, in the chemical and pharmaceutical industry as well as in seepage water treatment plants. Due to its excellent chemical and thermal resistance properties and particularly in view of its outstanding permeation resistance, BORNUMHARZ 6101 can be utilised in a wide range of applications. As a result of ist relatively good thermal conductivity, it is also highly suitable as a lining material for heatable apparatus. On account of its electrically discharging properties, this lining system is also recommended for application in areas where sparking must be prevented because of possible explosion hazards.

Properties
BORNUMHARZ 6101 can be applied in a temperature range extending from 0 to +120°C, depending on the media loads. The outstanding feature of this material is its excellent chemical resistance to organic and inorganic acids, excluding oxidizing acids. Another salient feature is an excellent chemical resistance to solvents, including chlorinated hydrocarbons. BORNUMHARZ 6101 is especially recommended as a lining material in environments containing a mixture of acids and solvents.

Chemical resistance
Information regarding the chemical and thermal resistance is available upon request or may be obtained from our list of resistance properties.

Substrate
The substrate consists of steel. All steel constructions must meet the requirements contained in DIN EN 14879-1.

Surface pre-treatment
The steel surface must be sandblasted to a white metal finish. A derusting degree of Sa 2 ½ as per DIN EN ISO 12944-4 and a “medium (G)” surface roughness degree as specified in DIN EN ISO 8503-1 must be achieved; minimum roughness R_z = 50 mm (Segment 2). The steel surface must be primed after blast cleaning.

Application
BORNUMHARZ 6101 is composed of a one-component primer solution 6101/P1, the adhesive solution 6101/L1 and the BORNUMHARZ-sheet.
Apply one coat of the primer solution 6101/P1 and one coat of the adhesive solution 6101/L1.
The sheets and seam/weld areas must be washed off with methanol.
A long-lasting and solid bond is achieved by firmly pressing down the sheet, followed by the vulcanisation process.

Coverage

Primer solution 6101/P1	approx. 0.15 kg/m²
Adhesive solution 6101/L1	approx. 0.20 kg/m²

Packing
The products are shipped in the following standard packing units:

Primer solution 6101/P1	7 kg
Adhesive solution 6101/L	1 7 kg

Storage
The products must be stored in a cool and dry location. The minimum shelf life for each component at a storage temperature of 23°C is indicated below:

Primer solution 6101/P1	6 months
Adhesive solution 6101/L1	6 months

BORNUNHARZ-sheet 6101/3mm (rolled-out sheet)
3 days
Higher temperatures will shorten the shelf life of these products. The packing units are to be kept tightly sealed and are to be resealed each time materials have been removed. All liquid products are to be stored in a frostfree environment.

Safety
Adequate ventilation is to be provided while work is in progress. Ventilation is compulsory for all work carried out in pits and closed rooms. All vapours that are produced while work is in progress must be continuously suctioned off at floor or bottom level. Only

the amount of material effectively required to continue work is to be stored at the working place. The instructions for the prevention of fire and explosion are to be observed if required.
Please note and ensure that even the smallest quantities of the individual components and/or prepared mixtures are not allowed to reach the sewerage.
All regulations for the prevention of accidents stipulated by the employer's liability assurance association, the regulations for the prevention of accidents prescribed at the site of application and the TRGS 507 „Surface treatment in rooms and tanks", as well as the safety precautions listed on the packing (label) required by the provisions of the Hazardous Materials Ordinance shall be adhered to. The operating instructions pursuant to §
14 GefStoffV as well as the EC safety data sheets are to be complied with.

Technical data	**Test specification**	**Unit**	**Parameter**
Density	DIN EN ISO 1183-1	g/cm³	1.76 ± 0.02
Plastic hardness	DIN 53456	MPa	150 ± 20
Resistance to tear	DIN 53504	MPa	≥ 30
Elongation at tear *)	DIN 53504	%	> 0.1
Adhesive strength	DIN EN ISO 4624	N/mm^2	≥ 6
max. service temperature		°C	120

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